



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,149	07/15/2003	James L. Kroening	450.366US1	1189

7590 01/09/2008
Gateway, Inc.
Attention: Scott Charles Richardson
610 Gateway Drive, MD Y-04
N. Sioux City, SD 57049

EXAMINER

TRAN, DENISE

ART UNIT	PAPER NUMBER
----------	--------------

2188

MAIL DATE	DELIVERY MODE
-----------	---------------

01/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/621,149	Applicant(s) KROENING, JAMES L.	
	Examiner Denise Tran	Art Unit 2185	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8,9,11-14,16,17,19 and 30-37 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 14,16,17 and 19 is/are allowed.
 6) ☒ Claim(s) 1,4,5,9,11-13 and 30-37 is/are rejected.
 7) ☒ Claim(s) 2 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/18/07 has been entered.
2. The applicant's amendment filed 10/18/07 has been considered. Claims 1-2, 4-5, 8-9, 11-14, 16-17, 19, 30-31 and new added claims 32-37 are presented for examination. Claims 3, 6-7, 10, 15, 18, and 20-29 have been canceled.
3. Claim 11 is objected to because of the following informalities: "a first" and "a second" should be --the first-- and --the second--. Appropriate correction is required.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claim 14, an address spread within the dual write command;" claim 30, "the information to be read contains a header designating a dual write operation"; claim 32, "dual write command is hard drive firmware command;" claim 37, "additionally comprising providing a reserve area on the

storage device that is not accessible by the operating system" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 4-5, 9, 11-13, 30, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Paterson et al., U.S. Patent No. 6,412, 042.

As per claim 1, Paterson teaches a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations on the storage device to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20);

wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20);

wherein a first one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20) and a second one of the two locations is outside of the reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20).

As per claim 30, Paterson teaches a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col. 11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20);

wherein the read buffer is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20); and

wherein the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20); and

wherein a first one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20) and a second one of the two locations is outside of the reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20).

As per claims 4-5, 9, and 11-13, Paterson teaches the information to be read being associated with a write command designated a dual write operation (e.g., col. 11, line 60 to col. 12, line 20) and a bit flag is inherently taught by Paterson because in a computer system, a command or data is recognized by a bit flag, such as a write bit flag; the storage device comprising a disk drive (e.g., fig. 1, el. 10); the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20); the information is written to both of the locations during a same write cycle (e.g., col. 12, lines 1-20); the two locations comprise a first location and a second location based, the second location being upon a calculation performed on the first location (i.e., selecting the second location being upon comparing access time or error performed on the first location; e.g., col. 8, lines 50-60; col. 18, lines 35-45); and writing the information to both locations comprises writing the information to a plurality of locations comprising both locations and at least one additional location (e.g., col. 14, line 55 to col. 15, line 20).

Claims 35 and 36, Paterson teaches the reserve area of the storage device is determined prior to the writing of the information to both of the two locations (i.e., the addresses of the two locations, data and duplicate copy locations are determined prior to the writing of the information to both of the two locations; e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20); access to the first one of the two locations in the reserve area is not dependent upon accessibility of the second one of the two locations

outside of the reserve area of the storage device (i.e., access to the two locations depends on time stamp or recently data; e.g., col. 7, lines 25-45).

10. The indicated allowability of claims 31-32 and 8 is withdrawn in view of the reference(s) to Cheston et al. US patent No. 6,167,494 (hereinafter Cheston) and Assaf US patent No. 5,966,732 (hereinafter Cheston).

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 8, 31, 33-34, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Cheston et al. US patent No. 6,167,494 (hereinafter Cheston).

As per claim 31, Paterson teaches a method of writing information, the method implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20). Paterson does not explicitly show the two locations are determined based upon a percentage of a read size of the storage device. Cheston shows the two locations are determined based upon a percentage of a read size of a storage device (e.g., col. 5, lines 25-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cheston into the method of Paterson because it would increasing data reliability by recovery data from a reserve area.

Claims 8 and 33-34, 37, Paterson does not explicitly show the two locations are determined based upon a percentage of a read size of the storage device; the reserve area is not accessible using the operating system; the reserve area is not within the comprehension of the operating system; additionally comprising providing a reserve area on the storage device that is not accessible by the operating system. Cheston shows the two locations are determined based upon a percentage of a read size of a storage device (e.g., col. 5, lines 25-45); the reserve area is not accessible using the operating system (e.g., col. 3, lines 1-10); the reserve area is not within the comprehension of the operating system (e.g., col. 3, lines 1-10); additionally comprising providing a reserve area on the storage device that is not accessible by the operating system (e.g., col. 3, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cheston into the method of Paterson because it would increasing data reliability by recovery data from the reserve area which is not accessible using the operating system.

13. Claim 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Assaf US patent No. 5,966,732 (hereinafter Cheston).

As per claim 32, Paterson teaches a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20);

wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20);

wherein one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use, e.g., col. 11, line 60 to col. 12, line 20);
and

wherein the reserve area is a protected area that is protected from access by a host command (i.e., one of two areas is protected from retrieve data by host command until the other one has an error e.g., col. 11, lines 15-25; col. 18, lines 25-65 and et

Art Unit: 2185

seq.) and a user is inherently taught by Paterson, col. 11, lines 15-25 because a host command or instruction is generated by a user or a host is controlled by a user; and Paterson does not explicitly show wherein the dual write command is a hard drive firmware command. Assaf shows a command is a hard drive firmware command (e.g., col. 3, lines 15-20; col. 5, lines 20-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Assaf into the method of Paterson because it would provide an easy in updating firmware comparing to hardware.

14. Claims 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Claims 14, 16-17, 19 are allowable over the prior art of record.

16. Applicant's arguments filed 10/18/07 have been fully considered but they are not persuasive.

17. In the remarks, the applicant argued that Paterson does not teach that wherein a first one of the two locations is within a reserve area of the storage device and a second one of the two locations is outside of the reserve area of the storage device and Paterson does not make any distinction between areas.

The examiner disagreed with the applicant's argument because Paterson teaches wherein a first one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20) and a second one of the two locations is outside of the reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20).

In particular, Paterson, (e.g., fig 5, 76, 78; col. 12, lines 5-15 and col. 18, lines 5-15) makes a distinction between the areas, one area for storing data and the other area for storing duplicate copy data for future used. Also, Paterson, (e.g., fig 5, 76, 78; col. 12, lines 5-30) teaches one area is outside of the other area. Therefore, Paterson teaches a first one of the two locations is within a reserve area of the storage device and a second one of the two locations is outside of the reserve area of the storage device.

18. In the remarks, the applicant argued that Paterson does not teach that the reserve area of the storage device is determined prior to the writing of the information to both of the two locations; and access to the first one of the two locations in the reserve area is not dependent upon accessibility of the second one of the two locations outside of the reserve area of the storage device.

The examiner disagreed with the applicant argument. Paterson teaches the reserve area of the storage device is determined prior to the writing of the information to both of the two locations (i.e., the addresses of the two locations, data and duplicate copy locations are determined prior to the writing of the information to both of the two locations; e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20); access to the first one of the two locations in the reserve area is not dependent upon accessibility of the second one of the two locations outside of the reserve area of the storage device (i.e., access to the two locations depends on time stamp or recently data; e.g., col. 7, lines 25-45).

19. The other Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (571) 272-4189. The examiner can normally be reached on Monday, Thursday, and an alternated Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sough Hyung, can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 2185

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Denise Tran". The signature is fluid and cursive, with the first letter of each word being capitalized and prominent.

Denise Tran

1/4/08